eBook

THALES
Building a future we can all trust

Win the digital banking race by accelerating digital transformation while reducing costs and risks

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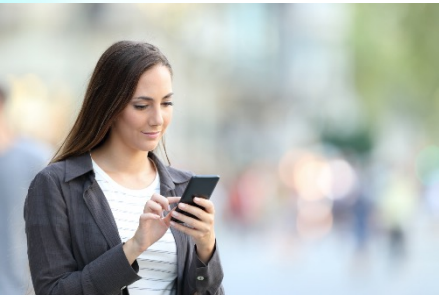
Financial services drive towards innovation and transformation

Consumer habits and competitive pressures change the face of financial services



Hyper personalized digital experience

Consumers have come to expect a hyper-personalized experience that is fast, convenient, and secure.

Omni-channel digital payments

The exponential global growth of remote, mobile, contactless and peer-to-peer digital payments is changing the face of consumer transactions.

Open banking, transparency

Open banking ecosystems based on APIs promise to dramatically increase competition and transparency.

Digitalization of contracts, subscriptions

Full digitalization of banking processes including subscriptions, contracts, and consumption of services.

Remote work and cloud collaboration

The pandemic forced a once unthinkable move to remote work, and a complete migration to the cloud for multiple bank systems.

Digital-only banks and Fintechs

Fintechs, neobanks, and other non-traditional players are all facing lower barriers of entry in a digital-only world.

Financial institutions advance digital transformation

Financial institutions have been rapidly adopting new technologies and platforms to better serve customers win competitive advantages:

Cloud adoption

Cloud adoption has reached 91% of financial institutions according to the Cloud Security Alliance. Processing power and elasticity enable the delivery of services ranging from better customer experience to data processing and cloud-based payments.

Blockchain usage

Blockchain usage is growing at both large financial institutions and Fintechs, reaching an astounding 62% compound annual growth, powering new business models and helping reduce fraudulent transactions.

Artificial Intelligence (AI)

Artificial Intelligence (AI) usage in the financial services industry is expected to continue to grow at a rate of 32.6% a year, helping improve customer service and reduce risk through automated threat intelligence and fraud analysis applications.

Big Data analytics

Big Data spending at financial institutions is estimated to be growing at an average of 27.7% a year, allowing financial institutions to gain insights faster for better risk assessment, and improved investment and credit decisions.

91%
Of all financial institutions are actively using **Cloud Services**[1]

62%
Average annual growth in **Blockchain** spending by financial institutions[2]

32.6%
Average annual growth in **Artificial Intelligence** spending by financial institutions[3]

27.7%
Average annual growth in **Big Data** spending by financial institutions[4]

1 ABA: Cloud Is on the Rise in Financial Services
2 TRBC: Blockchain In Banking And Financial Services Market
3 Research and Markets: The Global AI in Banking Market Will Grow to $64.03 Billion by 2030
4 Emergen Research: Big Data Analytics in BFSI Market

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74%

of financial services respondents have **2 or more IaaS cloud platforms**

69%

reported having **five or more key management solutions**

137

is the **average number of SaaS platforms** for a financial institutions

only 46%

of their sensitive data in cloud is encrypted on average

Digital transformation increases complexity challenges

Digital transformation at financial institutions increases the complexity of hybrid IT infrastructure and the risk of data breach.

A challenging multi-cloud world

The 2023 Thales Data Threat Report Financial Services Edition shows that 74% of financial institutions have two or more Infrastructure-as-a-Service (IaaS) providers.[5]

Key management complexities

69% of financial institutions reported having five or more key management solutions, increasing complexity and making it cumbersome (and expensive) to manage.[5]

SaaS overload

Financial institutions have 137 SaaS platforms on average, 36% more than the global average.[5]

Lack of protection for sensitive data

Financial institutions reported that on average only 46% of their sensitive data stored in the cloud is encrypted.[5]

5: 2023 Thales Data Threat Report Financial Services Edition

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Cyber attacks threaten the new Hybrid IT Infrastructure

Financial institutions are no stranger to cyber attacks. Banks have always been subjected to the most sophisticated cyber attacks. However, the number, intensity, and sophistication of attacks is seeing an alarming rise, and the cloud is the number one target.

Target cloud

By a wide margin, cloud-based resources are seen as the number one target of attackers within the financial service industry.[5]

Growing cyber attacks

A third of financial institutions (31%) experienced a data breach in their cloud environment in the last year.[5]

Persistent Ransomware Threat

64% of financial services respondents report that ransomware attacks are increasing, versus 49% of the average of all industries.[5]

The average cost of cyber attacks

The average cost of a cyber attack in the financial industry sector reached US$5.9M in 2023 according to the Ponemon Institute. The largest share of the cost is composed of lost business and reputational damage.[6]

5: 2023 Thales Data Threat Report Financial Services Edition
6: Ponemon & IBM: Cost of Data Breach Report 2023

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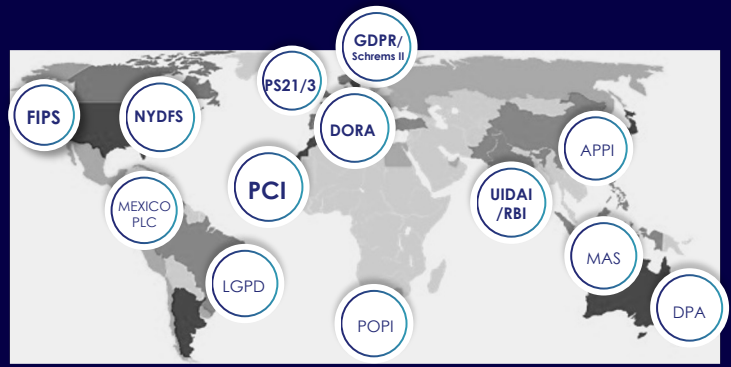
Expanding # of regulations on data privacy, sovereignty and operational resilience

Increased complexity and cost of compliance with regulations negatively impact financial performance



Ever-increasing amounts of sensitive customer data are captured in the process of digitalization in order to make banking easier and to create new desirable financial services for customers. However this data also represents a liability.

Privacy regulations such as GDPR and financial data security standards and regulations such as PCI, NYDFS, and MAS TRM set a high bar for financial institutions, obligating the protection of sensitive personal and financial data, and levying substantial fines for not doing so.

Emerging cybersecurity and operational resilience regulations such as the EU's DORA, and the US Executive Order on Improving the Nation's Cybersecurity, all focus on improving the overall "resilience" of enterprises and government agencies.

Financial institutions face a difficult situation. The digital customer experience, openness of modern banking, and flexibility of hybrid IT are essential to their business. Nevertheless, they create vulnerabilities, when it comes to privacy and data protection.

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How Thales can help

Thales enables financial institutions to reduce risk, complexity, and cost, while strengthening security and accelerating digital transformation

Increase security and resilience

Automate and streamline data protection and access management across cloud and on-premises systems

Reduce risk, complexity, and cost

Simplify compliance and minimize reputational and operational risk with centralized data security governance

Accelerate digital transformation

Offer better services by adopting innovations, such as Big Data, Cloud, and AI faster with a framework for a zero-trust world

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Increase security and resilience

Automate and streamline data protection and access management across cloud and on-premises systems

Centralize key management for third-party security solutions across cloud, hybrid, and on-premises environments

Minimize the threat of data breach by de-identifying all sensitive data in all new environments and legacy platforms, including partners and suppliers

Centralize access management and multi-factor authentication with single sign on to all IaaS, PaaS, SaaS, and on-premises platforms

SaaS, PaaS, IaaS services

On-premises systems

File repositories and databases

External 3rd party collaboration

Remote IoT devices

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Improved data security for complex Hybrid IT for European financial institution

Centralized security policy control and compliance across multiple platforms

Challenge

- **A Major European financial institution** had multiple enterprise customers demanding highest level of data security for financial services.
- The complexity of hybrid space including public cloud, SaaS services and legacy on-prem systems made it challenging.
- The enterprise lacked visibility and central control over security policies and had limited technical expertise for managing cryptographic platforms.

Solution

- **Thales acted as a trusted advisor,** helping create and implement security policy best practices and centralizing control over data security and access to sensitive data.
- **CipherTrust Data Security Platform** provided a single pane of glass for key management in the cloud and on-premises.
- **Data Protection on Demand (DPoD)** Luna Cloud HSM provided root of trust for cryptographic processes.

Results

- **Improved security posture and compliance**, setting best practices for the entire company.
- **Gained peace of mind** with solutions that have clear path for future scalability and integrations support.
- **Enabled cloud key management** for Azure and Office 365, expanding to AWS and planned Salesforce and ServiceNow.
- **Lowered Total Cost of Ownership (TCO)** by minimizing need for in-house crypto management expertise or infrastructure by leveraging HSM in the cloud.

Optimized access to multiple cloud and on-premises environments

Simplified access management experience and security on hybrid environments

Challenge

- **A regional Financial Institution** wanted to ensure a smooth transition to the cloud with secure access to hybrid environments.
- The COVID 19 pandemic forced a rapid expansion of remote work support for 800+ employees.
- The organization required secure access to their Linux environment for IT team with MFA and to move away from hardware tokens because of the complexity of management.

Solution

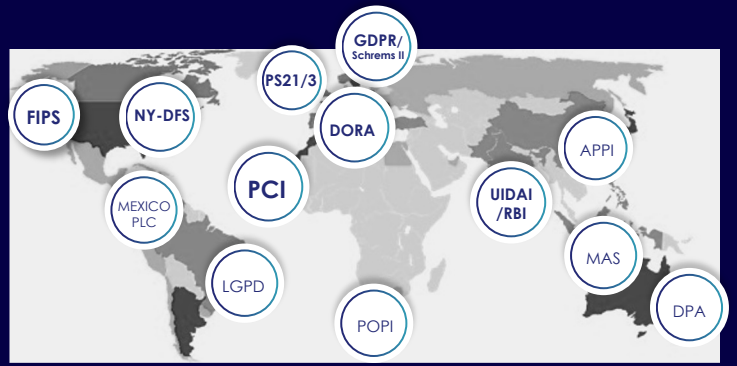
- **Implemented cloud-based SafeNet Trusted Access** with single sign on (cloud SSO) and centralized policy-based access management from a single pane of glass.
- Added software token MFA for cloud environments while maintaining existing MFA for other applications.
- Expanded remote work capabilities with advanced security to 800+ employees.

Results

- **Simplified access to hybrid environments** such as Windows, Citrix, and Linux with Cloud SSO.
- **Improved compliance and minimized risk of data breach** through centralized access control with granular policies.
- **Optimized security and customer experience** for remote working conditions.
- **Automated access management functions** and provided path for future scalability.

Reduce risk and complexity

Accelerate time to compliance with centralized data and identity security governance



Discover and classify data across hybrid IT according to sensitivity to specific legislation requirements.

Automate data protection with centralized policy-based enforcement with 360 degree visibility on a single pane of glass.

Apply data privacy and sovereignty rules through granular data and access security controls with MFA authentication.

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North American Bank Discover, Protect, and Control Sensitive Data on Hybrid IT

Simplified compliance with end-to-end data security governance for Hybrid IT

Challenge

- **A regional North American bank** with several highly regulated corporate customers and thousands of foreign citizen accounts needed to implement comprehensive data security governance to simplify compliance with multiple regulations.
- The customer needed to be able to discover sensitive data across hybrid IT, protect it effectively with best-in-class security, and control access to this data based on regulation-driven security policies across on-premises and cloud environments.

Solution

- **CipherTrust Data Security Platform** provided complete data security governance.
  - **Discover: CipherTrust Data Discovery and Classification** was deployed to locate sensitive data across hybrid IT.
  - **Protect: CipherTrust Transparent Encryption** was used to protect data-at-rest in Windows file systems and sequel databases.
  - **Control: CipherTrust Cloud Key Manager (CCKM)** was implemented to secure and manage keys used in multiple cloud environments.

Results

- **Strengthened security posture** across Hybrid IT Systems, with a single pane of glass providing visibility and control over protection of sensitive data.
- **Automated and simplified compliance** with multiple national and international regulations with granular data security policies applied across environments.
- **Enabled secure migration** to cloud environments such as Azure, Office 365 and Salesforce.
- **Scaled seamlessly** from on-premises, to cloud, to overall data security governance with complete platform.

DataMesh™ Case Study

PCI-compliant high volume payments protection for Datamesh in Asia-Pacific

Ensure compliance, performance and scalability of payment transactions

Challenge

- **Independent payment processing network DataMesh** needed to expand existing payment switching network to meet performance and scalability targets.
- DataMesh was required to meet payments standards and banking regulations such as PCI DSS / PCI PIN and AusPayNet.
- The financial institution wanted to expand of processing volume capability (transactions per second), and have full remote management capabilities of the new hardware.

Solution

- **payShield Hardware Security Modules** were deployed in clusters within managed service data centers in multiple locations.
- High speed links with Transport Layer Security (TLS) connected diverse cloud environments.
- **payShield Manager** enabled the secure remote management of the HSM clusters.

Results

- **Increased performance and scalability** with world-class encryption implementation capable of supporting business growth targets.
- **Reduced risk** with a PCI and EMV compliant, Card Present (CP) and Card Not Present (CNP) payment switching network.
- **Reduced cost** with comprehensive remote administration and management, including the ability to upgrade performance licenses.

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Accelerate digital transformation

Adopt and integrate innovations such as Big Data, IoT, Blockchain, and AI faster with a resilient framework built with security by design.

Secure all emerging financial transactions, from mobile and cloud-based payments to blockchain.

Protect data in multi-cloud environments with BYOK, HYOK, BYOE, and centralized key lifecycle management

Adopt a zero-trust posture for all environments with MFA, intelligent SSO, and centralized access controls

Big Data

Multi-cloud

Mobile Payments

Artificial intelligence

Blockchain

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Case Study

Accelerate Digital Transformation and Compliance for a leading Financial Security Group in Asia-Pacific

Highly scalable data protection at rest for hybrid and multi-cloud environment

Challenge

- **A leading financial security group in the Asia Pacific** is was moving their data analytics, business applications, and infrastructure to the cloud.
- The enterprise required a highly scalable solution to provide data protection across a hybrid and multi-cloud environment ensuring the progress of their digital transformation
- The enterprise wanted to continue to comply with regulations such as the Personal Data Protection Act (PDPA), PCI DSS, HIPAA, and GDPR.

Solution

- The financial institution deployed an array of Thales solutions to provide comprehensive security to across multiple hybrid systems.
- **Ciphertrust Cloud Key Manager (CCKM)** and **Ciphertrust Manager** were deployed to simplify and strengthen key management in the cloud (BYOK) and on-premises systems.
- **CipherTrust Transparent Encryption** was implemented to protect personal, health, and financial data files, while **CipherTrust Tokenization** was deployed to de-identify and pseudonymize structured data in databases.
- **Luna Cloud HSM services** provided a FIPS 140-2 L3 root of trust for sensitive keys.

Results

- **Strengthened security and compliance** by addressing the demands of a range of security and privacy mandates and regional data protection and privacy laws.
- **Optimized staff and resource efficiency** by delivering the broadest support of data security use cases in the industry, hyper-focused on ease of use, APIs for automation and responsive management.
- **Reduced total cost of ownership** with a comprehensive set of data security products and solutions that easily scale, expand into new use cases, and have a proven track record of securing new and traditional technologies.

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treezor Case Study

Secure open banking across the payment chain for Treezor

Fast time-to-market, security, and compliance for innovative services

Challenge

- **Treezor** is an innovative fintech, providing solutions for real-time core-banking systems, payments, KYC, and personalized card programs.
- The company is subject to numerous stringent regulations from CIPA to PCI DSS and required a Hardware Security Module (HSM) root of trust integrated with the company's payment gateway application.
- It was essential to have fast time to market, flexibility, and agility from a business and operational/ technical perspective.

Solution

- Evaluated **SafeNet Data Protection on Demand (DPOD)** with a 30 day free trial.
- Expanded the service based on Data Protection on Demand's high availability solution and committed SLA.
- HSM as a managed service with redundancy and backup services included as a standard feature of the 99.95% SLA.

Results

- **Provided the cloud-based root of trust** that allowed customer to provide services simply, securely and cost-effectively across the entire payment chain.
- **Achieved fast time-to-market** with easy deployment and zero upfront investment, low Total Cost of Ownership (TCO), and flexible usage-based pricing.
- **Achieved audit compliance** by protecting primary account numbers (PAN), as required by regulations such as PCI-DSS.

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Secure cloud migration for large Latin American financial institution

Streamlined data protection and compliance across cloud and on-premises

Challenge

- **A large Latin American financial institution** was going through an extensive process of digital transformation, adopting IaaS and SaaS platforms to better serve its customers.
- The organization needed to ensure continued compliance with multiple global and regional data protection regulations.
- It also wanted to have centralized visibility over security, data protection policies, and access control of data stored in the cloud.

Solution

- **CipherTrust Transparent Encryption** was implemented to protect data in all formats across MS Azure and on-premises repositories.
- **CipherTrust Cloud Key Manager** was implemented to protect encryption keys on MS Azure and Salesforce, using FIPS 140-2 Level 3 Hardware Security Modules to secure keys.
- Centralized policy-based control over data security and access to sensitive data minimizing external and internal threats.

Results

- **Streamlined data protection** across multiple platforms with "less privileged" access policy for all environments.
- **Centralized management of multi-vendor keys**, allowing data security while business areas take advantage of cloud services.
- **Simplified compliance** with policy-based control and reporting approved by internal audit team.
- **Maintained system performance** and IT operations processes were not affected by the encode/ decode process.

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Thales helps more than 3,000 financial institutions secure their banking and payment services around the world

Thales solutions help organizations simplify financial services compliance, facilitate security auditing, protect their customer's data, and avoid data breaches, ultimately reducing the cost and risk of adopting new technologies.

Thales secures **80%** of the world's POS transactions.

10 out of **10** top banks work with Thales.

Thales Cloud Protection & Licensing

Our Solutions

- Data Protection
- Access Management & Authentication
- Software Monetization

Over 2,600 employees

25 Countries Presence

750 Engineers Worldwide

30,000 Customers Worldwide

The people we rely on to secure our privacy rely on Thales

#1 Worldwide in general-purpose HSMs	#1 Worldwide in data encryption
#1 Worldwide in payment HSMs	#1 Worldwide in key management
#1 Worldwide in cloud HSMs	#2 Worldwide in cloud authentication
#1 Worldwide in software protection	#1 Worldwide in software licensing

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